EXHIBIT C

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Case 0.20-CV-01170-ADA DOCUIT	Herit 30-3 Filed 11/03/21	raye 3 01 20			
	Application No.	Applicant(s)			
Office Actions Commence	13/160,658	CAI ET AL.			
Office Action Summary	Examiner	Art Unit			
	QUAN M. HUA	2645			
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONEI	ely filed the mailing date of this communication. (35 U.S.C. § 133).			
Status					
1) Responsive to communication(s) filed on 29 No	ovember 2012.				
2a) ☐ This action is FINAL . 2b) ☑ This	action is non-final.				
3) An election was made by the applicant in response to a restriction requirement set forth during the interview on					
; the restriction requirement and election have been incorporated into this action.					
4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under E	<i>x parte Quayle</i> , 1935 C.D. 11, 45	3 O.G. 213.			
Disposition of Claims					
5) Claim(s) 1-20 is/are pending in the application. 5a) Of the above claim(s) is/are withdrawn from consideration. 6) Claim(s) is/are allowed. 7) Claim(s) 1-20 is/are rejected. 8) Claim(s) is/are objected to. 9) Claim(s) are subject to restriction and/or election requirement.					
* If any claims have been determined <u>allowable</u> , you may be eligible to benefit from the Patent Prosecution Highway program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .					
Application Papers					
 10) ☐ The specification is objected to by the Examiner. 11) ☒ The drawing(s) filed on 15 June 2011 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 					
Priority under 35 U.S.C. § 119					
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the prior application from the International Bureau * See the attached detailed Office action for a list of	s have been received. s have been received in Application ity documents have been receive I (PCT Rule 17.2(a)).	on No Id in this National Stage			
Attachment(s)					
1) Notice of References Cited (PTO-892)	3) Interview Summary Paper No(s)/Mail Da				
2) Information Disclosure Statement(s) (PTO/SB/08)	4) Other:	<u></u> -			

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DETAILED ACTION

1. Claims (1-20) are pending in the instant application.

Priority

2. No priority claim/documents are received at this time.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 11/29/2012 and 12/15/2011 in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Oath/Declaration

4. Oath/Declaration as filed (06/15/2011) is noted by the Examiner.

Drawings

5. Drawing as filed (06/15/2011) is accepted by the Office.

Claim Objections

- 6. Claims 1, 7 10 and 16-20 are objected to because of the following informalities: The claim recites the term "RESTful" which appears to be an abbreviation for the term *Representational State Transfer*. The terms are not accompanied by an explanation for the abbreviation. Appropriate correction is required.
- 7. Claim 8 is objected for insistency in language usage. Claim 8, in line3 recites "..the send message.." which is inconsistent in terminology with its antecedent basis "send request" in line
- 2. Appropriate correction is required.

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8. Claim 17 is objected for insistency in language usage. Claim 8, in line3 recites "..the send message.." which is inconsistent in terminology with its antecedent basis "send request" in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims (1-9 and 19-20) are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 has been evaluated for patent eligibility under 35 USC 101 for system/apparatus claim type. Claim 1 recites an *interface* and a *controller*. According to the instant Specification, in particular [0074] which states:

"[0074] Any of the various elements shown in the figures or described herein may be implemented as hardware, software, firmware, or some combination of these.... Moreover, explicit use of the term "processor" or "controller" should not be construed to refer exclusively to hardware capable of executing software, and may implicitly include ...logic...module." (emphasis added)

The *interface* and *controller* are therefore not excluded from software embodiments as expressively stated by [0074] above, thus rendering the system a combination of software under broadest reasonable interpretation. The claim is therefore deemed as non-statutory and rejected under this section.

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Dependent claims 2-9 merely describe further functionalities/steps performed by the *controller* and the *interface* and do not further introduce any hardware structure. Claims 2-9 are thus rejected in light of the dependency on claim 1.

Similarly, the system claim 19 is directed to a system comprising an Application Programming Interface (API) performing similar operation in claim 1. The API does not exclude hardware embodiment according the cited Specification in light the analysis above. Furthermore, API as known in the art is protocol for routing data structure and routines and software, thus cannot be considered a physical structure by broadest reasonable interpretation. The claim is therefore deemed as non-statutory and rejected under this section.

Dependent claim 20 merely describes further functionality/steps performed by the the interface and do not further introduce any hardware structure. Claim 20 is thus rejected in light of the dependency on claim 19.

Claim Rejections - 35 USC § 103

- 10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 11. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 - 1. Determining the scope and contents of the prior art.
 - 2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.

- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 12. Claims **1-3, 5-12, 14-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Geen** et al. (WO **2009/133544**), hereafter **Geen**, in view of **DeLuca** (US **2012/0023175**).

As to claim 1:

Geen discloses A system (See Fig. 19 – detailed system chart comprising at least the Comprehensive Messaging Server (CMS), Fig. 8 - system structure block diagram) comprising: an interface (See Page 12, lines 5-10, aggregated multi-protocol single interface, See fig. 8, the interface comprising a plurality of separate protocol connectors – REST, IMAP, Diameter etc..) operable to receive a RESTful send operation for sending a Mobile Terminated (MT) text message from a messaging client (See Fig. 18 – receive by the CMS the HHTP PUT send operation to user id XYZ (first step), Page 33 – lines 1-9 - the operation is to forward the message as text message to the user XYZ's mobile device);

and a controller operable to convert the RESTful send operation for the MT text message to a send request that is based on a signaling protocol used in a packet-switched network (See Page 13, lines 4 through 27 and fig. 18, the send request HTTP PUT, through the CMS, becomes the Short Message (SM) SUBMIT to be transmitted to the SMSC – e.g. part of a packet switch network);

the interface is further operable to transmit the send request for the MT text message to the packet-switched network for delivery of the MT text message to a recipient. (See Page 13, lines 4 through 27 and fig. 18, the Short Message (SM) SUBMIT is transmitted to the SMSC from the CMS – e.g. part of a packet switch network)

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Geen discloses the interface to receive the HTTP PUT message, i.e. the RESTful send

operation, from a messaging client.

Except that **Geen** does not explicitly refers the messaging client as a web application.

DeLuca however in a related field discloses that a messaging client, such as that of

Geen, is one of possible implementation of web application (See DeLuca, [0011]).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made that Geen's messaging client is implemented as a web application because web

browsers in which web applications are typically implemented requires little memory space

compared to a stand-alone messaging software and reduce the number of software a processor

having to manage. Furthermore, as Geen utilizes the RESTful protocol for messaging as

indicated above, which are typically used for web applications, one of ordinary skill in the art

would construe the message client as a web application.

As to claim 2:

Geen in view of DeLuca discloses all limitations of claim 1 and further discloses the

signaling protocol used in the packet-switched network comprises Session Initiation Protocol

(SIP). (See Geen, Page 13, lines 5-10, SIP messaging for SIP enabled-device is among protocols

convertible by the CMS 10 to the aggregated single protocol REST, See Page 23, lines 4 to 16 -

recipient for CMS to route a message is in SIP domain)

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As to **claim 3**:

Geen in view of **DeLuca** discloses all limitations of claim 1 and further discloses the signaling protocol used in the packet-switched network comprises Short Message Peer-to-Peer (SMPP) protocol. (See Geen, Page 13, lines 5-10, SMPP is among protocols convertible by the

CMS 10 to the aggregated single protocol REST)

As to **claim 5**:

Geen in view of DeLuca discloses all limitations of claim 1 and further discloses the MT

text message comprises a Short Messaging Service (SMS) message. (See Geen, page 33, lines 3)

As to **claim 6**:

Geen in view of DeLuca discloses all limitations of claim 1 and further discloses the MT

text message comprises a Multimedia Messaging Service (MMS) message. (See Geen, page 33,

lines 13-16 – message deposited as MMS transaction)

As to **claim 7**:

Geen in view of DeLuca discloses all limitations of claim 1 and further discloses the

interface is further operable to receive a status message from the packet-switched network

indicating a delivery status for at least one of the send request and the MT text message (See

Geen, Fig. 18 – CMS to receive the 200 OK/XML from the presence server of the recipient

network's side to indicate whether a delivery status - i.e. whether the recipient is available for

delivery);

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the controller is further operable to convert the status message from the signaling protocol used in the packet-switched network to a RESTful status operation (See Geen, Fig. 18, message 200 Ok is relayed by the CMS to the messaging client in a conversion as the messaging client and the CMS uses the RESTful protocol and thus different than protocol between the CMS and other server as seen in Fig. 5 and Page 13, lines 5-10);

and the interface is further operable to transmit the RESTful status operation to the web application (See Geen, Fig. 18, message 200 Ok is relayed by the CMS to the messaging client)

As to **claim 8**:

Green in view of **DeLuca** discloses all limitations of claim 1 and further disclose the interface is further operable to receive a send request for a Mobile Originated (MO) text message from the packet-switched network, wherein the send message for the MO text message is based on the signaling protocol used in the packet-switched network; (See Geen, Page 35, lines 21 to 27, Fig. 19, the Submit (B,A MsgContent) request send from SMSC (packet network) to the CMS *via the packet network's respective protocol*)

the controller is further operable to convert the send request for the MO text message to a RESTful receive operation for receiving the MO text message in the web application

(See Geen, Page 35, lines 21-27, step profile check through Ok (MsgContent_speech) – the CMS convert the received request to an operation for the MO text message to be retrievable by the RESTful-enabled Messaging client A);

and the interface is further operable to transmit the RESTful receive operation for the MO text message to the web application for delivery of the MO text message to a user of the web

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application. (See Geen, page 35, lines 30 through page 36 line 3, Fig. 19, step transmitting

Message (A, MsgContent-Speech for delivery in step (Play (MsgContent-Speech))

As to claim 9:

Green in view of DeLuca discloses all limitations of claim 8 and further disclose the

interface is further operable to receive a RESTful status operation from the web application

indicating a delivery status for the MO text message (See Geen Fig. 19, the CMS receive the OK

(Speech reply) from the Messaging client A via the Media server);

the controller is further operable to convert the RESTful status operation to a status

message that is based on the signaling protocol used in the packet-switched network (See Geen,

Fig. 19, the step of Transcode (SpeechReply) is performed by the CMS to convert the reply to the

text protocol used by the Client B in the packet switch network (SMSC));

and the interface is further operable to transmit the status message to the packet-switched

network (See Geen, Fig. 19, the step of transmitting SM SUBMIT from CMS to SMSC)

As to **claim 10**:

Green discloses a method (*Abstract*) comprising:

receiving a RESTful send operation for sending a Mobile Terminated (MT) text message

from a messaging client (See Geen, Fig. 18 – receive by the CMS the HHTP PUT send operation

to user id XYZ (first step), Page 33 – lines 1-9 - the operation is to forward the message as text

message to the user XYZ's mobile device);

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converting the RESTful send operation for the MT text message to a send request that is based on a signaling protocol used in a packet-switched network (See Geen Page 13, lines 4 through 27 and fig. 18, the send request HTTP PUT, through the CMS, becomes the Short Message (SM) SUBMIT in a protocol supported by the packet-switch network, to be transmitted to the SMSC- e.g. part of a packet switch network);

and transmitting the send request for the MT text message to the packet-switched network for delivery of the MT text message to a recipient (See Geen Page 13, lines 4 through 27 and fig. 18, the Short Message (SM) SUBMIT is transmitted to the SMSC from the CMS – e.g. part of a packet switch network).

Geen discloses the interface to receive the HTTP PUT message, i.e. the RESTful send operation, from a messaging client.

Except that **Geen** does not explicitly refers the messaging client as a web application.

DeLuca however in a related field discloses that a messaging client, such as that of Geen, is one of possible implementation of web application (See DeLuca, [0011]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Geen's messaging client is implemented as a web application because web browsers in which web applications are typically implemented requires little memory space compared to a stand-alone messaging software and reduce the number of software a processor having to manage. Furthermore, as Geen utilizes the RESTful protocol for messaging as indicated above, which are typically used for web applications, one of ordinary skill in the art would construe the message client as a web application.

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As to **claim 11**:

Geen in view of DeLuca discloses all limitations of claim 10 and further discloses the

signaling protocol used in the packet-switched network comprises Session Initiation Protocol

(SIP). (See Geen, Page 13, lines 5-10, SIP messaging for SIP enabled-device is among protocols

convertible by the CMS 10 to the aggregated single protocol REST, See Page 23, lines 4 to 16 -

recipient for CMS to route a message is in SIP domain)

As to claim 12:

Geen in view of DeLuca discloses all limitations of claim 10 and further discloses the

signaling protocol used in the packet-switched network comprises Short Message Peer-to-Peer

(SMPP) protocol. (See Geen, Page 13, lines 5-10, SMPP is among protocols convertible by the

CMS 10 to the aggregated single protocol REST)

As to claim 14:

Geen in view of DeLuca discloses all limitations of claim 10 and further discloses the

MT text message comprises a Short Messaging Service (SMS) message. (See Geen, page 33,

lines 3)

As to claim 15:

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Geen in view of DeLuca discloses all limitations of claim 10 and further discloses the MT text message comprises a Multimedia Messaging Service (MMS) message. (See Geen, page 33, lines 13-16 – message deposited as MMS transaction)

As to **claim 16**:

Geen in view of DeLuca discloses all limitations of claim 10 and further discloses receive a status message from the packet-switched network indicating a delivery status for at least one of the send request and the MT text message (See Geen Fig. 18 – CMS to receive the 200 OK/XML from the presence server of the recipient network's side to indicate whether a delivery status - i.e. whether the recipient is available for delivery);

converting the status message from the signaling protocol used in the packet-switched network to a RESTful status operation (See Geen, Fig. 18, message 200 Ok is relayed by the CMS to the messaging client in a conversion as the messaging client and the CMS uses the RESTful protocol and thus different than protocol between the CMS and other server as seen in Fig. 5 and Page 13, lines 5-10);

transmitting the RESTful status operation to the web application (See Geen, Fig. 18, message 200 Ok is relayed by the CMS to the messaging client)

As to claim 17:

Green in view of **DeLuca** discloses all limitations of claim 10 and further disclose receiving a send request for a Mobile Originated (MO) text message from the packet-switched network, wherein the send message for the MO text message is based on the signaling protocol

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used in the packet-switched network; (See Geen Page 35, lines 21 to 27, Fig. 19, the Submit (B,A MsgContent) request send from SMSC (packet network) to the CMS via the packet network's respective protocol)

converting the send request for the MO text message to a RESTful receive operation for receiving the MO text message in the web application

(See Geen Page 35, lines 21-27, step profile check through Ok (MsgContent_speech) – the CMS convert the received request to an operation for the MO text message to be retrievable by the RESTful-enabled Messaging client A);

and transmitting the RESTful receive operation for the MO text message to the web application for delivery of the MO text message to a user of the web application. (See Geen page 35, lines 30 through page 36 line 3, Fig. 19, step transmitting Message (A, MsgContent-Speech for delivery in step (Play (MsgContent-Speech)

As to **claim 18**:

Green in view of **DeLuca** discloses all limitations of claim 17 and further disclose receiving a RESTful status operation from the web application indicating a delivery status for the MO text message (See Geen Fig. 19, the CMS receive the OK (Speech reply) from the Messaging client A via the Media server);

converting the RESTful status operation to a status message that is based on the signaling protocol used in the packet-switched network (See Geen Fig. 19, the step of Transcode (SpeechReply) is performed by the CMS to convert the reply to the text protocol used by the Client B in the packet switch network (SMSC));

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and transmitting the status message to the packet-switched network (See Geen Fig. 19,

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the step of transmitting SM SUBMIT from CMS to SMSC)

As to **claim 19**:

Geen discloses system comprising:

an Application Programming Interface (API) for a web application used in text

messaging (See Page 12, lines 5-10, aggregated multi-protocol single interface, See fig. 8, the

interface comprising a plurality of separate protocol connectors – REST, IMAP, Diameter etc..);

the API operable to receive a RESTful send operation for sending a Mobile Terminated

(MT) text message from a messaging client (See Fig. 18 – receive by the CMS the HHTP PUT

send operation to user id XYZ (first step), Page 33 – lines 1-9 - the operation is to forward the

message as text message to the user XYZ's mobile device);

to convert the RESTful send operation for the MT text message to a send request that is

based on a signaling protocol used in a packet-switched network (See Page 13, lines 4 through

27 and fig. 18, the send request HTTP PUT, through the CMS, becomes the Short Message (SM)

SUBMIT to be transmitted to the SMSC - e.g. part of a packet switch network);

and to transmit the send request for the MT text message to the packet-switched network

for delivery of the MT text message to a recipient.

(See Page 13, lines 4 through 27 and fig. 18, the Short Message (SM) SUBMIT is

transmitted to the SMSC from the CMS – e.g. part of a packet switch network)

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Geen discloses the interface to receive the HTTP PUT message, i.e. the RESTful send operation, from a messaging client.

Except that **Geen** does not explicitly refers the messaging client as a web application.

DeLuca however in a related field discloses that a messaging client, such as that of Geen, is one of possible implementation of web application (See DeLuca, [0011]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Geen's messaging client is implemented as a web application because web browsers in which web applications are typically implemented requires little memory space compared to a stand-alone messaging software and reduce the number of software a processor having to manage. Furthermore, as Geen utilizes the RESTful protocol for messaging as indicated above, which are typically used for web applications, one of ordinary skill in the art would construe the message client as a web application.

As to **claim 20**:

The system of claim 19 wherein: the API is further operable to receive a send request for a Mobile Originated (MO) text message from the packet-switched network, wherein the send request for the MO text message is based on the signaling protocol used in the packet-switched network, (See Geen Page 35, lines 21 to 27, Fig. 19, the Submit (B,A MsgContent) request send from SMSC (packet network) to the CMS via the packet network's respective protocol)

to convert the send request for the MO text message to a RESTful receive operation for receiving the MO text message in the web application, (See Geen Page 35, lines 21-27, step

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profile check through Ok (MsgContent_speech) – the CMS convert the received request to an operation for the MO text message to be retrievable by the RESTful-enabled Messaging client A)

and to transmit the RESTful receive operation for the MO text message to the web application for delivery of the MO text message to a user of the web application. (See Geen page 35, lines 30 through page 36 line 3, Fig. 19, step transmitting Message (A, MsgContent-Speech for delivery in step (Play (MsgContent-Speech)

13. Claims **4** and **13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Geen** in view of **DeLuca** and in further view of **Magee** et al. (US **2002/0056001**), hereafter **Magee**.

As to claims 4 and 13:

Geen in view of **DeLuca** discloses all limitations of claim 1 and 10 where the recipient is located in a UMTS network where the CMS to rout the send operation to (*See Page 23*, *lines 10-14*).

Except that **Geen** in view of **DeLuca** does not explicitly disclose discloses the signaling protocol used in the packet-switched network comprises Mobile Application Part (MAP) protocol.

However, **Magee** in a related field discloses the UMTS network as disclosed by **Geen** has MAP protocol as the core network signaling protocol (*See Magee [0012] – MAP as core network protocol for UMTS*)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made that **Geen**'s recipient network uses the MAP protocol as disclosed in **Magee**

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because: as stated by Magee in [0012], MAP is a core network signal protocol of the UMTS

network.

Art Unit Relocation

The Art Unit location of your application in the USPTO has changed. To aid in

correlating any papers for this application, all further correspondence regarding this

application should be directed to Art Unit 2645.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Clarke et al. (US 2005/0036498) – Clarke et al disclosing a system comprising a

protocol interfacing device located in between networks of different protocol (Fig. 1 - 14), in

which the protocol interfacing device comprises proxies to various protocol which connected to a

translator engine 32 to translate operations between devices located in different protocol domains

to realize interworking between said protocols.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to QUAN M. HUA whose telephone number is (571)270-7232. The

examiner can normally be reached on Monday through Friday, 8:30 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Anthony S. Addy can be reached on (571)-272-7795. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QUAN M HUA/

Examiner, Art Unit 2645